AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-36. (canceled).

37. (new) A method for detecting a malfunction of an internal combustion engine thermostat provided in a coolant circulating path, said method comprising:

detecting a first temperature of coolant on the coolant circulating path on the engine side of the thermostat at a location spaced from the thermostat;

determining whether the first temperature is less than an opening temperature of the thermostat;

detecting an intake air amount;

calculating a value based on the intake amount;

detecting, after the first temperature is detected, a second engine side coolant temperature at the location spaced from the thermostat during a period in which the thermostat is normally to be closed; and

detecting an open-malfunction of the thermostat based on the calculated value and the second engine side coolant temperature in case the first temperature is determined to be lower than the opening temperature.

38. (new) A method as in claim 37, wherein said detecting an open-malfunction determines whether the second engine side coolant temperature fails to reach a reference temperature before the calculated value reaches a reference value, for detecting the open-malfunction of the thermostat.

822520

39. (new) A method as in claim 37, wherein said detecting an open-malfunction determines whether the calculated value reaches a reference value before the second engine side coolant temperature reaches a reference temperature.

822520